

Ref ID: A0169  
CRF Processing Date:  
Edited by: 1008  
Verified by: HB

Serial Number:

09/5/99 0130

- Changed a file from non-ASCII to ASCII
- Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- Edited a format error in the Current Application Data section, specifically:
- 
- Edited the Current Application Data section with the actual current number. The number inputted by applicant was  the prior application data; or  other \_\_\_\_\_
- Added the mandatory heading and subheadings for "Current Application Data".
- Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- Changed the spelling of a mandatory field (the headings or subheadings), specifically:
- 
- Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were \_\_\_\_\_
- 
- Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: **ENTERED**
- 
- Corrected subheading placement. All responses must be on the same line as each subheading. If applicant placed a response below the subheading, this was moved to its appropriate place.
- Inserted colons after headings/subheadings. Headings edited included:
- 
- Deleted extra, invalid, headings used by an applicant, specifically:
- 
- Deleted:  non-ASCII "garbage" at the beginning/end of files;  secretary initials/filename at  page numbers throughout text;  other invalid text, such as \_\_\_\_\_
- 
- Inserted mandatory headings, specifically:
- 
- Corrected an obvious error in the response, specifically:
- 
- Edited identifiers where upper case is used but lower case is required, or vice versa.
- Corrected an error in the Number of Sequences field, specifically:
- 
- A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly due to a PatentIn bug). Sequences corrected:
- Other: *Edited sequence number 5 and sequence number 9. Specifically field offsets were not aligned with the left margin*

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DEC 03 2001

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\*Examiner: The above corrections must be communicated to the applicant in the first O Action. DO NOT send a copy of this form.

#13

1642

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DEC 03 2001

TECH CEN IER 1000/15  
DEC 1 5  
P 1000/15

DEC 12 2013  
INTER 1600/2900

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DEC -6 2001  
TC 3700 MAIL ROOM

DATE: 11/02/2001  
TIME: 09:41:55

TIME: 09:41:55

**RAW SEQUENCE LISTING** 5  
**PATENT APPLICATION:** US/09/599,013B

Input Set : A:\pto.mh.txt  
Output Set: N:\CRF3\11022001\I599013B.raw

3 <110> APPLICANT: Ono, Toshiro  
4 Nakayama, Eiichi  
6 <120> TITLE OF INVENTION: CANCER ASSOCIATED ANTIGENS AND USES  
7 THEREFOR  
9 <130> FILE REFERENCE: L0461/7086 5  
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/509,013B  
12 <141> CURRENT FILING DATE: 2000-04-26  
14 <150> PRIOR APPLICATION NUMBER: US 60/168,353  
15 <151> PRIOR FILING DATE: 1999-12-01  
17 <160> NUMBER OF SEQ ID NOS: 32  
19 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
21 <210> SEQ ID NO: 1  
22 <211> LENGTH: 538  
23 <212> TYPE: DNA  
24 <213> ORGANISM: Mus musculus  
26 <400> SEQUENCE: 1  
27 agatcaaggg gaaaaaggaga accccatgcg ggaactgcgc atccgcgaac tctgcctcaa  
28 tatctgcgtc ggggagagcg gagacagact gacccggca gccaagggtgt tggagcagct  
29 cacaggccag acccccgtgt tctccaaagc tagatacact gtcaggtcct ttggcatccg  
30 gagaaatgtag aagattgctg ttcaactgcac agtccgcggaa gccaaggcag agggaaattct  
31 ggagaaaaggc ctgaaggtgc gggaggtatga gttgcggaaa aataacttct cggataactgg  
32 aaacttgggt ttggaaattc aagaacacat tgacctggc atcaaataacg acccaagcat  
33 tgggatctac gcgcctggact tctatgttgt gctgggtagg ccagggttca gcatcgcaga  
34 caagaagcgc agaacaggct gcattggggc caaacacaga atcagcaagg aggaggccat  
35 gcgcgtggttc cagcagaagt acgatggaaat catccttcct ggaaaataaa cttgatcc  
37 <210> SEQ ID NO: 2  
38 <211> LENGTH: 175  
39 <212> TYPE: PRT  
40 <213> ORGANISM: Mus musculus  
42 <400> SEQUENCE: 2  
43 Asp Gln Gly Glu Lys Glu Asn Pro Met Arg Glu Leu Arg Ile Arg Lys  
44 1 5 10 15  
45 Leu Cys Leu Asn Ile Cys Val Gly Glu Ser Gly Asp Arg Leu Thr Arg  
46 20 25 30  
47 Ala Ala Lys Val Leu Glu Gln Leu Thr Gly Gln Thr Pro Val Phe Ser  
48 35 40 45  
49 Lys Ala Arg Tyr Thr Val Arg Ser Phe Gly Ile Arg Arg Asn Glu Lys  
50 50 55 60  
51 Ile Ala Val His Cys Thr Val Arg Gly Ala Lys Ala Glu Glu Ile Leu  
52 65 70 75 80  
53 Glu Lys Gly Leu Lys Val Arg Glu Tyr Glu Leu Arg Lys Asn Asn Phe  
54 85 90 95  
55 Ser Asp Thr Gly Asn Phe Gly Phe Gly Ile Gln Glu His Ile Asp Leu  
56 100 105 110  
57 Gly Ile Lys Tyr Asp Pro Ser Ile Gly Ile Tyr Gly Leu Asp Phe Tyr  
58 115 120 125  
59 Val Val Leu Gly Arg Pro Gly Phe Ser Ile Ala Asp Lys Lys Arg Arg  
ENT  
ENTE

NonErrored

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001  
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Input Set : A:\pto.mh.txt  
Output Set: N:\CRF3\11022001\I599013B.raw

60	130	135	140	
61	Thr Gly Cys Ile Gly Ala Lys His Arg Ile Ser Lys Glu Glu Ala Met			
62	145	150	155	160
63	Arg Trp Phe Gln Gln Lys Tyr Asp Gly Ile Ile Leu Pro Gly Lys			
64	165	170	175	
66	<210> SEQ ID NO: 3			
67	<211> LENGTH: 1228			
68	<212> TYPE: DNA			
69	<213> ORGANISM: Mus musculus			
71	<400> SEQUENCE: 3			
72	acagccgcat cttcttgc agtgcgcgtc tgcgtccgtaa gacaaaaatgg tgaaggcg 60			
73	tgtgaacgga ttggccgtt ttggcgcctt ggtaaccagg gtcgcattt gcagtggca 120			
74	agtggagatt gttgccatca acgaccctt cattgaccc tcactacatgg tctacatgtt 180			
75	ccagtagac tccactcacg gcaaattcaa cggcacagtc aaggccgaga atggaaagct 240			
76	tgtcatcaac gggaaagccca tcaccatctt ccaggagcga gaccccaacta acatcaaatg 300			
77	gggtgaggcc ggtgctgagt atgtcggtt gtctactggt gtcttcacca ccatggagaa 360			
78	ggccggggcc cacttgaagg gtggagccaa acgggtcata atctccgccc ttctgccc 420			
79	tgccccccatg tttgtatgg gtgtgaacca cgagaaatat gacaactcac tcaagatgt 480			
80	cagcaatgca tcctgcacca ccaactgctt agcccccgtt gccaaggcata tccatgacaa 540			
81	ctttggcatt gtggaaaggc tcatgaccac agtccatgcc atcaactgcca cccagaagac 600			
82	tgtggatggc ccctctggaa agctgtggcg tgatggccgt gggctgccc agaacatcat 660			
83	ccctgcattcc actgggtcgtt ccaaggctgtt gggcaaggcata atcccagagc tgaacggaa 720			
84	gctcaactggc atggccttcc gtgttccatcc ccccaatgtt tccgtcggtt atctgacgt 780			
85	ccgcctggag aaacctgcca agtatgtatca catcaagaag gtggtaagc aggcatctga 840			
86	gggcccactg aaggcatctt tggctacac tgaggaccag gtgtctccct gcgacttcaa 900			
87	cagcaactcc cacttccatca ctttcgtatgc cggggctggc attgtctctca atgacaactt 960			
88	tgtcaagctc atttcctggt atgacaatga atacggctac agcaacagggttggac 1020			
89	catgcctac atggcctcca aggactaaga aaccctggac caccacccca agcaaggaca 1080			
90	ctgagcaaga gaggccctat cccactcgg ccccaacac tgagcatctc cctcacaatt 1140			
91	tccatcccag acccccataaa taacaggagg ggcttaggaa gccctcccta ctcttggaa 1200			
92	taccatcaat aaagttcgct gcaccac 1228			
94	<210> SEQ ID NO: 4			
95	<211> LENGTH: 333			
96	<212> TYPE: PRT			
97	<213> ORGANISM: Mus musculus			
99	<400> SEQUENCE: 4			
100	Met Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg Leu Val			
101	1 5 10 15			
102	Thr Arg Ala Ala Ile Cys Ser Gly Lys Val Glu Ile Val Ala Ile Asn			
103	20 25 30			
104	Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln Tyr Asp			
105	35 40 45			
106	Ser Thr His Gly Lys Phe Asn Gly Thr Val Lys Ala Glu Asn Gly Lys			
107	50 55 60			
108	Leu Val Ile Asn Gly Lys Pro Ile Thr Ile Phe Gln Glu Arg Asp Pro			
109	65 70 75 80			
110	Thr Asn Ile Lys Trp Gly Glu Ala Gly Ala Glu Tyr Val Val Glu Ser			
111	85 90 95			
112	Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu Lys Gly			

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Input Set : A:\pto.mh.txt  
Output Set: N:\CRF3\11022001\I599013B.raw

113           100           105           110  
114 Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala Pro Met  
115           115           120           125  
116 Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu Lys Ile  
117           130           135           140  
118 Val Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu Ala Lys  
119 145           150           155           160  
120 Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr Thr Val  
121           165           170           175  
122 His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser Gly Lys  
123           180           185           190  
124 Leu Trp Arg Asp Gly Arg Gly Ala Ala Gln Asn Ile Ile Pro Ala Ser  
125           195           200           205  
126 Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu Asn Gly  
127           210           215           220  
128 Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Pro Asn Val Ser Val  
129 225           230           235           240  
130 Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp Asp Ile  
131           245           250           255  
132 Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly Ile Leu  
133           260           265           270  
134 Gly Tyr Thr Glu Asp Gln Val Val Ser Cys Asp Phe Asn Ser Asn Ser  
135           275           280           285  
136 His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn Asp Asn  
137           290           295           300  
138 Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Tyr Gly Tyr Ser Asn  
139 305           310           315           320  
140 Arg Val Val Asp Leu Met Ala Tyr Met Ala Ser Lys Glu  
141           325           330  
143 <210> SEQ ID NO: 5  
144 <211> LENGTH: 1705  
145 <212> TYPE: DNA  
146 <213> ORGANISM: Mus musculus

W--> 147 <220> FEATURE:

148 <221> NAME/KEY: Unsure  
149 <222> LOCATION: (611)..(611)  
150 <223> OTHER INFORMATION: n = a, c, g, or t

W--> 151 <220> FEATURE:

152 <221> NAME/KEY: Unsure  
153 <222> LOCATION: (730)..(730)  
154 <223> OTHER INFORMATION: n = a, c, g, or t

W--> 155 <220> FEATURE:

156 <221> NAME/KEY: Unsure  
157 <222> LOCATION: (746)..(746)  
158 <223> OTHER INFORMATION: n = a, c, g, or t

W--> 160 <220> FEATURE:

161 <221> NAME/KEY: Unsure  
162 <222> LOCATION: (755)..(755)  
163 <223> OTHER INFORMATION: n = a, c, g, or t

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001

TIME: 09:41:55

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

W--&gt; 164 &lt;220&gt; FEATURE:

165 <221> NAME/KEY: Unsure  
 166 <222> LOCATION: (1288)..(1288)  
 167 <223> OTHER INFORMATION: n = a, c, g, or t

W--&gt; 168 &lt;220&gt; FEATURE:

169 <221> NAME/KEY: Unsure  
 170 <222> LOCATION: (1318)..(1318)  
 171 <223> OTHER INFORMATION: n = a, c, g, or t

W--&gt; 172 &lt;220&gt; FEATURE:

173 <221> NAME/KEY: Unsure  
 174 <222> LOCATION: (1360)..(1360)  
 175 <223> OTHER INFORMATION: n = a, c, g, or t  
 177 <400> SEQUENCE: 5

178	gccgcggta	gggaagtgga	cgcgatggcc	gggtccgcgt	gggtgtccaa	ggtctctcgg	60
179	ctgctgggtg	cattccacaa	cacaaaacag	gtgacaagag	gttttgcgtgg	tggtgttcag	120
180	acagtaactt	taattcctgg	agatgaaatt	ggcccagaaaa	tttcagcctc	agtcatgaag	180
181	atttttgatg	ctgccaaagc	acctattcag	tgggaggago	gcaatgtcac	agcaattcaa	240
182	ggaccaggag	gaaagtggat	gatccctcca	gaagccaagg	agtccatgga	taagaacaag	300
183	atgggcttga	aaggcccact	aaagacccca	atacccgctg	gccatccatc	tatgaatctg	360
184	ttgcttcgta	agacatttga	cctttatgcc	aatgtccggc	catgtgtc	aattgaaggt	420
185	tataaaaccc	cttacacgga	tgtaaatatac	gtcaccatcc	gagagaacac	ggaaggagaa	480
186	tacagtggaa	ttgagcatgt	gatcggtat	ggggttgtgc	agagcatcaa	gctcatcacc	540
187	gaagaagcaa	gcaagcgcac	tgcaaggtt	gctcagatgt	cgctcgaaac	aaccacccgga	600
188	accacgtcac	ngctgtgcac	aaaagcta	atcatgagga	tgtcagatgg	gctctttctg	660
189	caaaaatgca	gggaaatttgc	cggaagaact	gtaaagactt	aaatttaacg	agatgtactt	720
190	ggatactgt	ttttaatata	gggtanaaag	accntccaa	tttgatgttc	ttgtcatgccc	780
191	aaatttatac	ggagacatcc	tttagtgcatt	gtgtgcagga	ctgattggag	gtcttgggg	840
192	gactccaagt	ggcaatatttgc	gagccaaacgg	tgttgcattc	tttgaatcgg	ttcatggaa	900
193	agccccggac	attgcaggca	aggacatggc	caacccccacg	gccctcctgc	ttagtgcgt	960
194	gatgatgctt	cgcacatgg	gacttttgc	ccatgcagca	aaaatcgagg	ctgcatgttt	1020
195	tgctacaatt	aaggatggaa	agagcttaac	aaaagatctg	ggaggcaacg	cgaagtgc	1080
196	tgacttcaca	gaagaaatct	gtcgttagat	caaagactt	gattagca	cctgctgggt	1140
197	gatttgctgc	agtcagtcaa	tcactccaaa	aggataccct	gtaatcctcc	ttgagggcgc	1200
198	ccaccattgg	tttgcttgc	tcttgacaga	gtacgtttt	tgaatctggc	ctttcttaa	1260
199	caaaaaccc	tgcaatggat	gcacatgntg	gccccaggcc	tttcatcaa	aaggttnc	1320
200	ccaaagtgc	gtggatttt	ttgtcccg	tggtaaacn	ttatgttgc	aactgtaa	1380
201	gaactgtatc	atttatcatt	gttaaccat	tttacacttc	aggcaaaatc	atttcctca	1440
202	actgtaaata	ttctgatata	gaattaataa	gagaagat	ttaactttt	aacaaaagcc	1500
203	ctggattttt	ggttatgaa	aaacaaactg	ggaataaaac	agggtttaa	caatcgccaca	1560
204	agataacatt	attctaatac	taatgggtac	aaaagaaatt	tactggaaa	gttcacagca	1620
205	aaaaaaatgg	atatttctta	aaaatatgga	aataaagtat	ttgtccata	catgaattac	1680
206	tattaataaa	aatgtaaatgc	ccaaag				1705

208 &lt;210&gt; SEQ ID NO: 6

209 &lt;211&gt; LENGTH: 233

210 &lt;212&gt; TYPE: PRT

211 &lt;213&gt; ORGANISM: Mus musculus

213 &lt;220&gt; FEATURE:

214 &lt;221&gt; NAME/KEY: UNSURE

215 &lt;222&gt; LOCATION: (204)..(204)

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001  
TIME: 09:41:55

Input Set : A:\pto.mh.txt  
Output Set: N:\CRF3\11022001\I599013B.raw

216 <223> OTHER INFORMATION: Xaa = any amino acid  
**W--> 217 <400> SEQUENCE: 6**  
 218 Ala Ala Val Arg Glu Val Asp Ala Met Ala Gly Ser Ala Trp Val Ser  
 219 1 5 10 15  
 220 Lys Val Ser Arg Leu Leu Gly Ala Phe His Asn Thr Lys Gln Val Thr  
 221 20 25 30  
 222 Arg Gly Phe Ala Gly Gly Val Gln Thr Val Thr Leu Ile Pro Gly Asp  
 223 35 40 45  
 224 Gly Ile Gly Pro Glu Ile Ser Ala Ser Val Met Lys Ile Phe Asp Ala  
 225 50 55 60  
 226 Ala Lys Ala Pro Ile Gln Trp Glu Glu Arg Asn Val Thr Ala Ile Gln  
 227 65 70 75 80  
 228 Gly Pro Gly Gly Lys Trp Met Ile Pro Pro Glu Ala Lys Glu Ser Met  
 229 85 90 95  
 230 Asp Lys Asn Lys Met Gly Leu Lys Gly Pro Leu Lys Thr Pro Ile Ala  
 231 100 105 110  
 232 Ala Gly His Pro Ser Met Asn Leu Leu Leu Arg Lys Thr Phe Asp Leu  
 233 115 120 125  
 234 Tyr Ala Asn Val Arg Pro Cys Val Ser Ile Glu Gly Tyr Lys Thr Pro  
 235 130 135 140  
 236 Tyr Thr Asp Val Asn Ile Val Thr Ile Arg Glu Asn Thr Glu Gly Glu  
 237 145 150 155 160  
 238 Tyr Ser Gly Ile Glu His Val Ile Val Asp Gly Val Val Gln Ser Ile  
 239 165 170 175  
 240 Lys Leu Ile Thr Glu Glu Ala Ser Lys Arg Ile Ala Glu Phe Ala Ser  
 241 180 185 190  
**W--> 242 Ser Thr Leu Gly Thr Thr Thr Gly Thr Thr Ser Xaa Leu Cys Thr Lys**  
 243 195 200 205  
 244 Ala Asn Ile Met Arg Met Ser Asp Gly Leu Phe Leu Gln Lys Cys Arg  
 245 210 215 220  
 246 Glu Ile Cys Gly Arg Thr Val Lys Thr  
 247 225 230  
 249 <210> SEQ ID NO: 7  
 250 <211> LENGTH: 853  
 251 <212> TYPE: DNA  
 252 <213> ORGANISM: Mus musculus  
 254 <400> SEQUENCE: 7  
 255 gccatgttg gagagagaag agccaaacag ccatctccct gcacagtct tcaaagctcac 60  
 256 ctcctgcctt ccgtggacaa gaggaagcac aaagaatcat ccaggtatgg aagctgagg 120  
 257 ttccagccgc aaggtcacca ggctactccg cctgggagtc aaggaagact cggaaagaaca 180  
 258 gcatgatgtg aaagcagagg ctttcttcca ggctggagag gggagagatg agcaagggtgc 240  
 259 acagggccag cctggagtgg gagcgggtgg aacagaaggc gaaggagaag aattaaatgg 300  
 260 aggaaaaggc cactttggtc ctgggtgtcc tggccttatg ggtgatgggg acaaggataag 360  
 261 tggcaccagg gctgggtggt tggagcagga aaaaaatgag ccagttgtc agggcactga 420  
 262 gagccaggg aatggaaatc ctggggtagt gcagatgcc ctccagggtct taggttcgc 480  
 263 ccagcatcga ctgagggAAC tggagtccat ttgcagcgc actaattcct ttgatgtccc 540  
 264 aaggggagat ctgtatagac tgatggatgc ctgtgtgtcc agagtgcaga attggttaa 600  
 265 gatcaggagg gctcgccaa gaagaaccag gaggaggca acaccagtcc ctgaacattt 660  
 266 tagaggaaca ttcgagtgtc ctgcttgtcg tggagtgaga tggggagaaa gatgccctt 720

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001  
TIME: 09:41:56

Input Set : A:\pto.mh.txt  
Output Set: N:\CRF3\11022001\I599013B.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:147 M:283 W: Missing Blank Line separator, <220> field identifier  
L:151 M:283 W: Missing Blank Line separator, <220> field identifier  
L:155 M:283 W: Missing Blank Line separator, <220> field identifier  
L:164 M:283 W: Missing Blank Line separator, <220> field identifier  
L:168 M:283 W: Missing Blank Line separator, <220> field identifier  
L:172 M:283 W: Missing Blank Line separator, <220> field identifier  
L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:199 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:200 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:217 M:283 W: Missing Blank Line separator, <400> field identifier  
L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:310 M:283 W: Missing Blank Line separator, <220> field identifier  
L:314 M:283 W: Missing Blank Line separator, <220> field identifier  
L:318 M:283 W: Missing Blank Line separator, <220> field identifier  
L:327 M:283 W: Missing Blank Line separator, <220> field identifier  
L:331 M:283 W: Missing Blank Line separator, <220> field identifier  
L:335 M:283 W: Missing Blank Line separator, <220> field identifier  
L:339 M:283 W: Missing Blank Line separator, <220> field identifier  
L:343 M:283 W: Missing Blank Line separator, <220> field identifier  
L:347 M:283 W: Missing Blank Line separator, <220> field identifier  
L:356 M:283 W: Missing Blank Line separator, <220> field identifier  
L:360 M:283 W: Missing Blank Line separator, <220> field identifier  
L:364 M:283 W: Missing Blank Line separator, <220> field identifier  
L:368 M:283 W: Missing Blank Line separator, <220> field identifier  
L:372 M:283 W: Missing Blank Line separator, <220> field identifier  
L:376 M:283 W: Missing Blank Line separator, <220> field identifier  
L:385 M:283 W: Missing Blank Line separator, <220> field identifier  
L:389 M:283 W: Missing Blank Line separator, <220> field identifier  
L:393 M:283 W: Missing Blank Line separator, <220> field identifier  
L:397 M:283 W: Missing Blank Line separator, <220> field identifier  
L:401 M:283 W: Missing Blank Line separator, <220> field identifier  
L:405 M:283 W: Missing Blank Line separator, <220> field identifier  
L:414 M:283 W: Missing Blank Line separator, <220> field identifier  
L:418 M:283 W: Missing Blank Line separator, <220> field identifier  
L:422 M:283 W: Missing Blank Line separator, <220> field identifier  
L:426 M:283 W: Missing Blank Line separator, <220> field identifier  
L:430 M:283 W: Missing Blank Line separator, <220> field identifier  
L:434 M:283 W: Missing Blank Line separator, <220> field identifier  
L:443 M:283 W: Missing Blank Line separator, <220> field identifier  
L:447 M:283 W: Missing Blank Line separator, <220> field identifier  
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001

TIME: 09:41:56

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

L:658 M:283 W: Missing Blank Line separator, <220> field identifier

L:662 M:283 W: Missing Blank Line separator, <400> field identifier

L:664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15

VERIFICATION SUMMARY DATE: 11/02/2001  
PATENT APPLICATION: US/09/599,013B TIME: 09:13:08

Input Set : A:\pto.mh.txt  
Output Set: N:\CRF3\11022001\I599013B.raw

L:332 M:283 W: Missing Blank Line separator, <220> field identifier  
L:332 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:333 M:283 W: Missing Blank Line separator, <220> field identifier  
L:333 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:334 M:283 W: Missing Blank Line separator, <220> field identifier  
L:334 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:335 M:283 W: Missing Blank Line separator, <220> field identifier  
L:335 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:336 M:283 W: Missing Blank Line separator, <220> field identifier  
L:336 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:338 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:339 M:283 W: Missing Blank Line separator, <220> field identifier  
L:339 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:340 M:283 W: Missing Blank Line separator, <220> field identifier  
L:340 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:341 M:283 W: Missing Blank Line separator, <220> field identifier  
L:341 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:342 M:283 W: Missing Blank Line separator, <220> field identifier  
L:342 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:343 M:283 W: Missing Blank Line separator, <220> field identifier  
L:343 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:344 M:283 W: Missing Blank Line separator, <220> field identifier  
L:344 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:346 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:347 M:283 W: Missing Blank Line separator, <220> field identifier  
L:347 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:348 M:283 W: Missing Blank Line separator, <220> field identifier  
L:348 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:360 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:360 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:360 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:361 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:361 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:361 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:361 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:362 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:362 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:362 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:363 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:363 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:363 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:364 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:364 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:364 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:365 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001

TIME: 09:13:08

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

L:365 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:365 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:556 M:283 W: Missing Blank Line separator, <220> field identifier  
L:556 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:557 M:283 W: Missing Blank Line separator, <400> field identifier  
L:559 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:15  
L:559 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:15  
L:559 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:15  
L:559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15

**STATISTICS SUMMARY**

PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001

TIME: 09:13:08

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

Application Serial Number: US/09/599,013B

Alpha or Numeric: Numeric

Application Class:

Application File Date: 04-26-2000

Art Unit: 1642

Software Application: FastSeq

Total Number of Sequences: 32

Total Nucleotides: 11930

Total Amino Acids: 2684

Number of Errors: 0

Number of Warnings: 106

Number of Corrections: 1

**MESSAGE SUMMARY**

256 W: 35 (Invalid Numeric Header Field)

258 W: 21 (Mandatory Feature missing)

270 C: 1 (Current Application Number differs)

283 W: 38 (Missing Blank Line separator)

341 W: 12 ((46) "n" or "Xaa" used)